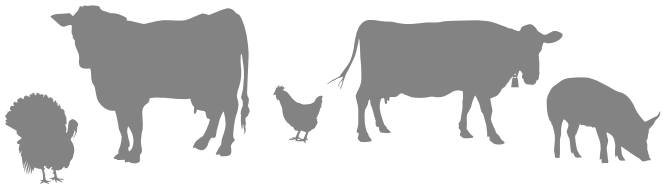
Kansas Department of Health and Environment



KANSAS SBEAP Small Business Environmental Assistance Program

2019

Compliance Calendar for Livestock

Facility name	
KDHE permit number	

- State-permitted sites may use this calendar to replace operational reports as required in the permit.
- Federal-permitted sites may use this calendar as a supplement to the operational report form available. Operational reports and annual reporting are still required using Microsoft Excel Workbook forms.

Electronic copies of the compliance calendar can be obtained at www.kdheks.gov/feedlots/ and www.sbeap.org

Kansas Small Business Environmental Assistance Program

Free environmental technical assistance

800-578-8898 • sbeap@ksu.edu • www.sbeap.org

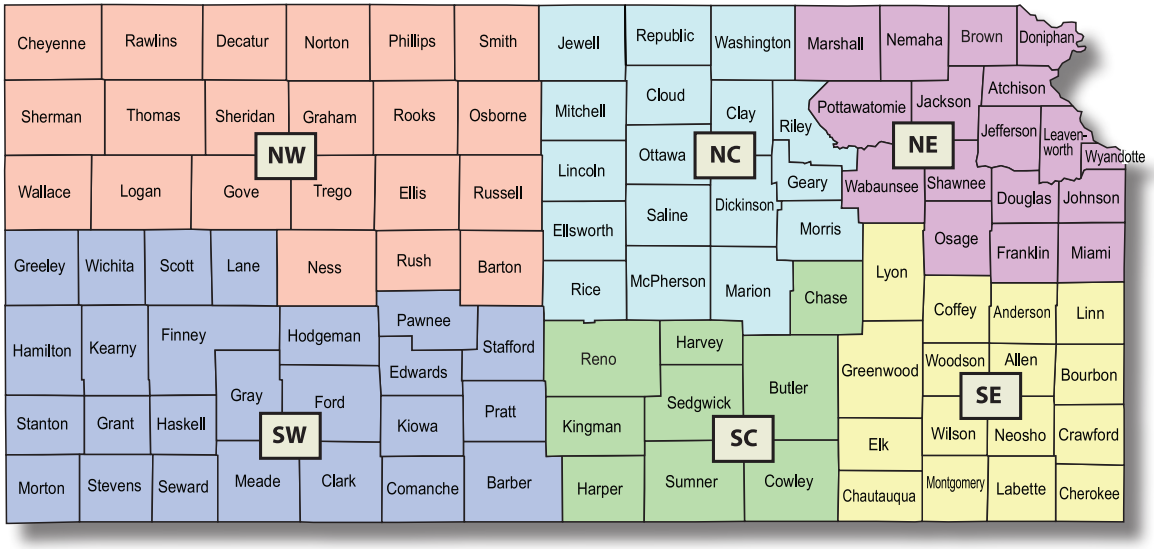
Paid for in part by the Kansas Department of Health and Environment

Kansas Department of Health and Environment

Bureau of Environmental Field Services
Livestock Waste Management Section
1000 SW Jackson St., Suite 430
Topeka, KS 66612-1367

785-296-6432

Related links, forms and technical guidance documents are available on KDHE's website at www.kdheks.gov/feedlots/



Contact Information KDHE District Offices

Northwest District
2301 E. 13th Street
Hays, Kansas 67601-2651
785-261-6100

Southwest District
302 West McArtor Road
Dodge City, KS 67801-6014
620-682-7940

Ulysses Satellite Office
313 West Oklahoma Terrace
Ulysses, KS 67880
620-356-2210

North Central District
2501 Market Place, Suite D
Salina, KS 67401-7699
785-827-9639

South Central District
300 West Douglas, Suite 700
Wichita, KS 67202-2921
316-337-6020

Northeast District
800 West 24th Street
Lawrence, Kansas 66046-4417
785-842-4600

Southeast District
308 West 14th Street
Chanute, KS 66720
620-431-2390

Report overflow or discharges within two hours of discovery to local district office, or call the spill hotline at 785-296-1679.

Kansas Water Pollution Control Permit for Agricultural and Related Wastes

PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY. THESE INSTRUCTIONS APPLY TO BOTH STATE AND FEDERAL KANSAS WATER POLLUTION CONTROL PERMITTED FACILITIES. CONTACT KDHE AT THE CONTACT INFORMATION LISTED BELOW IF YOU HAVE QUESTIONS.

NOTE FOR FEDERAL PERMITTED FACILITIES (NPDES PERMITS): If the calendar is used, it should supplement monthly Operations Reports done electronically using the Microsoft Excel Workbook™.

I. Record the **Maximum Number of Animals (head count)** actually confined at the facility at any one time during the month (not the permitted capacity). Maximum head count shall be recorded for each animal type/weight classification confined at the facility.

II. Record the **Daily Precipitation** amounts in inches. For snowfall, record the inches of snow and add an "S" (e.g. 6S).

III. **Daily Livestock Waste and/or Process Wastewater Disposal**

Land Application — The following information shall be recorded for each day livestock waste and/or process wastewater that is land-applied:

- **Field ID:** The destination of the livestock waste and/or process wastewater. The Field ID shall be consistent with the name or number used to identify the field in the most recently approved Waste Management Plan or Nutrient Management Plan. If more than one field is applied to on the same day, separate the fields in the Field ID column by a slash (/), comma (,), etc.
- **Soil Condition:** The soil condition – frozen (F), thawed (T), snow covered (SC) or saturated (S) – at the time of application. As a reminder, liquid waste shall not be applied when the ground is frozen, saturated or snow covered without prior permission from KDHE.
- **# of Acres:** The number of acres the livestock waste and/or process wastewater was applied to.
- **Crop:** The crop or other type of field cover the livestock waste and/or process wastewater was applied to.
- **Waste Source:** The specific source the livestock waste was taken from and/or the type of waste that was applied (e.g. manure stockpile, Retention Control Structure 2 (RCS 2), compost, etc.).
- **Application Method:** The method used to apply the livestock waste and/or process wastewater (e.g. broadcast, center pivot, etc.).
- **Total Waste Application:** Total tons (solids) or gallons (liquids) of livestock waste and/or process wastewater that was applied.

Transfers Between Structures — Record the following information for each day wastewater is transferred between Retention Control Structures (RCS):

- **RCS ID:** The destination of the wastewater. Record the name or number used to identify the RCS that received the wastewater.
- **Waste Source:** The name or number used to identify the RCS that the wastewater was transferred from.

  NOTE: The volume (gallons) transferred between RCSs does not need to be recorded.

IV. **Wastewater Retention Control Structure Levels** — Record the wastewater level (measured from the top of berm to the water surface) in each Retention Control Structure (RCS) present at the facility.

STATE PERMITTED FACILITIES: Record the wastewater level on the 1st and 15th of each month for each RCS. If a **FEDERAL PERMITTED FACILITY** and using this calendar, record wastewater level weekly for each RCS.

Both FEDERAL AND STATE PERMITTED FACILITIES: Whenever the wastewater in a RCS is above the permitted operating level, the actual wastewater level (measured from the top of berm to the water surface) shall be recorded **DAILY** until the permitted operating level is achieved.

Continued on next page.

V. In the **Visual Inspections,** verify the required routine daily and weekly visual inspections of the facility were conducted. Verification shall be recorded at a minimum of once per week.

Daily Inspections: Water lines, which include drinking water and cooling water lines

Weekly Inspections: Stormwater diversions, runoff diversion structures, and devices conveying contaminated stormwater to the manure storage area and wastewater retention control structure(s)

VI. In the **Notes** section, document any corrective action taken to correct deficiencies identified during daily and weekly visual inspections. Also, provide any comments on operation and maintenance activities (e.g. berm inspection, maintenance and repair), dates when manure application equipment was calibrated and/or any nutrient management issues (e.g. cropping changes).

VI. If your permit requires you to submit the monthly Operations Reports, mail, fax or email the required month to KDHE at the address listed below by the 10th of the month following the reporting period. A copy of the report shall be kept on site for a minimum of five years plus the current calendar year.

Contact Information: KDHE - BEFS - Livestock Waste Management Section, 1000 SW Jackson St., Suite 430, Topeka, KS 66612-1367
Phone: (785) 296-6432 • Fax: (785) 559-4258 • Email: kdhe.feedlots@ks.gov

Example of Daily Livestock Waste and/or Process Wastewater Disposal

Date	Precip-itation/ snow (S) (inches)	Daily Livestock Waste and/or Process Wastewater Disposal							
		Field ID (applied to) or RCS ID (transfers)	Soil condition: F = frozen T = thawed SC = snow cover S = saturated	# of acres (applied to)	Crop (growing or cover)	Waste source: solid and/or liquid	Application method	Total waste application	
								Solids (tons)	Liquids (gallons)
07/15/2018	0.05	A-XXXX-XXXX	S	40	Corn	Solid (beef feedlot)	Broadcast	415.2	
8/19/2018	0.01	A-XXXX-XXXX	T	100	Soybean	Solid (Poultry)	Broadcast	33.3	
8/30/2018	0	A-XXXX-XXXX	T	80	Sorghum	Liquid (Swine manure)	Injection		587951.8
11/15/2018	3 S	A-XXXX-XXXX	SC	160	Wheat	Liquid (dairy manure)	Center pivot		674698.8

Vertical Staff Gauges

The staff gauge is designed to allow reading of the amount of available storage the lagoon has from the lowest point in the berm to the water level. Materials used for the staff gauge may be metal, treated wood or pvc.

The staff gauge is to be marked in 12-inch increments that can easily be read to the nearest six inches from the berm.

Examples for the foot-increment marking materials include paint, rebar, bolts, notches, pipe clamps or holes.

Stake Method

- Place markers along slope
- Must be marked to read vertical measurement of available storage capacity
- Ensure numbers can be read above required storage level

Single Vertical Pole

- Normally set in new structure
- Set at a minimum three-foot depth with backfill of compacted soil or concrete

Report overflow or discharges within two hours of discovery to local district office, or call the spill hotline at 785-296-1679.

January 2019

Date	Precip-itation/ snow (S) (inches)	Daily Livestock Waste and/or Process Wastewater Disposal							
		Field ID (applied to) or RCS ID (transfers)	Soil condition: F = frozen T = thawed SC = snow cover S = saturated	# of acres (applied to)	Crop (growing or cover)	Waste source: solids, liquid	Application method	Total waste application	
								Solids (tons)	Liquids (gallons)

Conversion Factors for Manure*

1 ton = 2,000 pounds
1 cubic foot = 7.5 gallons
1 gallon = 8.3 pounds
1 yard = 27 cubic feet
1 cubic foot = 55 pounds (dry) to 62 pounds (wet)

For a quick, solid manure estimate, weigh a five-gallon pail of manure. Subtract the weight of the bucket (~ 2lbs) to get the actual weight of the manure. Multiply the weight of the manure by 40 to get pounds per cubic yard.

* Due to the variability of manure, using the above conversion factors will only provide an estimate. Actual manure test values will provide more accurate information.

Head # _____
Animal Type / Wt
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Head # _____
Animal Type / Wt
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Head # _____
Animal Type / Wt
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Record the storage capacity available in the retention control structures (RCS).

State permits record on the 1st and 15th. Federal permits must record weekly.

Waterline inspections required for federal permits weekly; recommended for state permits.

Notes

• *TIP OF THE MONTH!*

Transfer relevant information, if any, from last year's calendar to this year's calendar. If a permit has requirements for soil test sampling in vegetated buffers, land application areas or groundwater monitoring, plan to complete these in the upcoming months to meet deadlines.

January 2019

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1 RCS Op Levels: RCS 1: RCS 2: RCS 3: **New Year's Day**	2 **Weekly inspection** ☐	3	4	5
6	7	8	9 **Weekly inspection** ☐	10	11	12
13	14	15 RCS Op Levels: RCS 1: RCS 2: RCS 3:	16 **Weekly inspection** ☐	17	18	19
20	21 **Martin Luther King Jr. Day**	22	23 **Weekly inspection** ☐	24	25	26
27	28	29	30 **Weekly inspection** ☐	31	If minimum operating level (storage capacity) is not available, record available feet of storage daily; dewater on all suitable days.	

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February 2019

Date	Precip-itation/ snow (S) (inches)	Daily Livestock Waste and/or Process Wastewater Disposal							
		Field ID (applied to) or RCS ID (transfers)	Soil condition: F = frozen T = thawed SC = snow cover S = saturated	# of acres (applied to)	Crop (growing or cover)	Waste source: solids, liquid	Application method	Total waste application	
								Solids (tons)	Liquids (gallons)

Head # _____
Animal Type / Wt
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Head # _____
Animal Type / Wt
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Head # _____
Animal Type / Wt
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Soil sample cores must be taken to a depth of 24 inches. The top six to eight inches of each core should be combined to obtain a surface sample. Then combine the remaining portions of each core to obtain a profile sample.

Notes

Conversion Factors for Manure*

1 ton = 2,000 pounds
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1 gallon = 8.3 pounds
1 yard = 27 cubic feet
1 cubic foot = 55 pounds (dry) to 62 pounds (wet)

For a quick, solid manure estimate, weigh a five-gallon pail of manure. Subtract the weight of the bucket (~ 2lbs) to get the actual weight of the manure. Multiply the weight of the manure by 40 to get pounds per cubic yard.

* Due to the variability of manure, using the above conversion factors will only provide an estimate. Actual manure test values will provide more accurate information.

• *TIP OF THE MONTH!*

Water lines, including drinking and water or cooling lines, should be visually inspected daily. Confined animals should have no direct contact with the surface water.

February 2019

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					1 RCS Op Levels: RCS 1: RCS 2: RCS 3:	2 **Groundhog Day**
3	4	5	6 **Weekly inspection** ☐	7	8	9
10	11	12	13 **Weekly inspection** ☐	14 **Valentine's Day**	15 RCS Op Levels: RCS 1: RCS 2: RCS 3:	16
17	18 **President's Day**	19	20 **Weekly inspection** ☐	21	22	23
24	25	26	27 **Weekly inspection** ☐	28 Federal Permitee Annual Report due date	If minimum operating level (storage capacity) is not available, record available feet of storage daily; dewater on all suitable days.	

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March 2019

Date	Precip-itation/ snow (S) (inches)	Daily Livestock Waste and/or Process Wastewater Disposal							
		Field ID (applied to) or RCS ID (transfers)	Soil condition: F = frozen T = thawed SC = snow cover S = saturated	# of acres (applied to)	Crop (growing or cover)	Waste source: solids, liquid	Application method	Total waste application	
								Solids (tons)	Liquids (gallons)

Head # _____
Animal Type / Wt
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Head # _____
Animal Type / Wt
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Head # _____
Animal Type / Wt
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Liquid waste cannot be applied on ground that is saturated or during a precipitation event. If emergency de-watering is needed, contact KDHE.

Notes

Conversion Factors for Manure*

1 ton = 2,000 pounds
1 cubic foot = 7.5 gallons
1 gallon = 8.3 pounds
1 yard = 27 cubic feet
1 cubic foot = 55 pounds (dry) to 62 pounds (wet)

For a quick, solid manure estimate, weigh a five-gallon pail of manure. Subtract the weight of the bucket (~ 2lbs) to get the actual weight of the manure. Multiply the weight of the manure by 40 to get pounds per cubic yard.

* Due to the variability of manure, using the above conversion factors will only provide an estimate. Actual manure test values will provide more accurate information.

• *TIP OF THE MONTH!*

Plan for soil testing of application fields and analysis of waste for application needs. Apply nutrients when they will most likely be used by the plants.

March 2019

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
If minimum operating level (storage capacity) is not available, record available feet of storage daily; dewater on all suitable days.					1 RCS Op Levels: RCS 1: RCS 2: RCS 3:	2
3	4	5	6 **Weekly inspection** ☐	7	8	9
10 **Daylight Saving Time begins**	11	12	13 **Weekly inspection** ☐	14	15 RCS Op Levels: RCS 1: RCS 2: RCS 3:	16
17 **St. Patrick's Day**	18	19	20 **Weekly inspection** ☐	21	22	23
24 31	25	26	27 **Weekly inspection** ☐	28	29	30

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April 2019

Date	Precip-itation/ snow (S) (inches)	Daily Livestock Waste and/or Process Wastewater Disposal							
		Field ID (applied to) or RCS ID (transfers)	Soil condition: F = frozen T = thawed SC = snow cover S = saturated	# of acres (applied to)	Crop (growing or cover)	Waste source: solids, liquid	Application method	Total waste application	
								Solids (tons)	Liquids (gallons)

Head # _____
Animal Type / Wt
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Head # _____
Animal Type / Wt
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Head # _____
Animal Type / Wt
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Ensure a setback of 100 feet from any surface water or conduit to surface or groundwater during waste application, if a permanent grass buffer of 35 feet has not been maintained around the surface water.

Notes

Conversion Factors for Manure*

1 ton = 2,000 pounds
1 cubic foot = 7.5 gallons
1 gallon = 8.3 pounds
1 yard = 27 cubic feet
1 cubic foot = 55 pounds (dry) to 62 pounds (wet)

For a quick, solid manure estimate, weigh a five-gallon pail of manure. Subtract the weight of the bucket (~ 2lbs) to get the actual weight of the manure. Multiply the weight of the manure by 40 to get pounds per cubic yard.

* Due to the variability of manure, using the above conversion factors will only provide an estimate. Actual manure test values will provide more accurate information.

• *TIP OF THE MONTH!*

Records necessary to document compliance should be maintained for at least five years, in addition to the current calendar year.

April 2019

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1 RCS Op Levels: RCS 1: RCS 2: RCS 3:	2	3 **Weekly inspection** ☐	4	5	6
7	8	9	10 **Weekly inspection** ☐	11	12	13
14	15 RCS Op Levels: RCS 1: RCS 2: RCS 3:	16	17 **Weekly inspection** ☐	18	19 **Good Friday**	20
21 **Easter**	22 **Earth Day**	23	24 **Weekly inspection** ☐	25	26	27
28	29	30	If minimum operating level (storage capacity) is not available, record available feet of storage daily; dewater on all suitable days.			

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May 2019

Date	Precip-itation/ snow (S) (inches)	Daily Livestock Waste and/or Process Wastewater Disposal							
		Field ID (applied to) or RCS ID (transfers)	Soil condition: F = frozen T = thawed SC = snow cover S = saturated	# of acres (applied to)	Crop (growing or cover)	Waste source: solids, liquid	Application method	Total waste application	
								Solids (tons)	Liquids (gallons)

Head # _____

Animal Type / Wt

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Head # _____

Animal Type / Wt

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Head # _____

Animal Type / Wt

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Calibrate manure spreading equipment for accurate application rates.

A practical approach to calibration is to divide the volume of manure applied in a load by the acreage covered. This equals the application rate.

Notes

Conversion Factors for Manure*

1 ton = 2,000 pounds
1 cubic foot = 7.5 gallons
1 gallon = 8.3 pounds
1 yard = 27 cubic feet
1 cubic foot = 55 pounds (dry) to 62 pounds (wet)

For a quick, solid manure estimate, weigh a five-gallon pail of manure. Subtract the weight of the bucket (~ 2lbs) to get the actual weight of the manure. Multiply the weight of the manure by 40 to get pounds per cubic yard.

* Due to the variability of manure, using the above conversion factors will only provide an estimate. Actual manure test values will provide more accurate information.

• *TIP OF THE MONTH!*

Transfer relevant information, if any, from last year's calendar to this year's calendar. If a permit has requirements for soil test sampling in vegetated buffers, land application areas, or groundwater monitoring, plan to complete these in the upcoming months to meet deadlines.

May 2019

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
If minimum operating level (storage capacity) is not available, record available feet of storage daily; dewater on all suitable days.			1 RCS Op Levels: RCS 1: RCS 2: RCS 3: ☐ **Weekly inspection**	2	3	4
5	6	7	8 **Weekly inspection** ☐	9	10	11
12 **Mother's Day**	13	14	15 RCS Op Levels: RCS 1: RCS 2: RCS 3: ☐ **Weekly inspection**	16	17	18 **Armed Forces Day**
19	20	21	22 **Weekly inspection** ☐	23	24	25
26	27 **Memorial Day**	28	29 **Weekly inspection** ☐	30	31	

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June 2019

Date	Precip-itation/ snow (S) (inches)	Daily Livestock Waste and/or Process Wastewater Disposal							
		Field ID (applied to) or RCS ID (transfers)	Soil condition: F = frozen T = thawed SC = snow cover S = saturated	# of acres (applied to)	Crop (growing or cover)	Waste source: solids, liquid	Application method	Total waste application	
								Solids (tons)	Liquids (gallons)

Head # _____

Animal Type / Wt

_____

Head # _____

Animal Type / Wt

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Head # _____

Animal Type / Wt

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Walk around the waste control system and check for erosion, trees and any maintenance items that may need attention.

Notes

Conversion Factors for Manure*

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1 gallon = 8.3 pounds
1 yard = 27 cubic feet
1 cubic foot = 55 pounds (dry) to 62 pounds (wet)

For a quick, solid manure estimate, weigh a five-gallon pail of manure. Subtract the weight of the bucket (~ 2lbs) to get the actual weight of the manure. Multiply the weight of the manure by 40 to get pounds per cubic yard.

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• *TIP OF THE MONTH!*

You are halfway through the year! Have you been keeping up with inspections? Solvent leaks or spills will be caught sooner with regular inspections. Use this calendar to record results of inspections.

June 2019

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
If minimum operating level (storage capacity) is not available, record available feet of storage daily; dewater on all suitable days.						1 RCS Op Levels: RCS 1: RCS 2: RCS 3:
2	3	4	5 **Weekly inspection** ☐	6 **D-Day**	7	8
9	10	11	12 **Weekly inspection** ☐	13	14 **Flag Day**	15 RCS Op Levels: RCS 1: RCS 2: RCS 3:
16 **Father's Day**	17	18	19 **Weekly inspection** ☐	20	21 **Summer begins**	22
23 30	24	25	26 **Weekly inspection** ☐	27	28	29

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July 2019

Date	Precip-itation/ snow (S) (inches)	Daily Livestock Waste and/or Process Wastewater Disposal							
		Field ID (applied to) or RCS ID (transfers)	Soil condition: F = frozen T = thawed SC = snow cover S = saturated	# of acres (applied to)	Crop (growing or cover)	Waste source: solids, liquid	Application method	Total waste application	
								Solids (tons)	Liquids (gallons)

Head # _____

Animal Type / Wt

_____

Head # _____

Animal Type / Wt

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Head # _____

Animal Type / Wt

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Manure stockpiles should be placed so as to minimize runoff to streams or surface water prior to spreading.

Notes

Conversion Factors for Manure*

1 ton = 2,000 pounds
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1 gallon = 8.3 pounds
1 yard = 27 cubic feet
1 cubic foot = 55 pounds (dry) to 62 pounds (wet)

For a quick, solid manure estimate, weigh a five-gallon pail of manure. Subtract the weight of the bucket (~ 2lbs) to get the actual weight of the manure. Multiply the weight of the manure by 40 to get pounds per cubic yard.

* Due to the variability of manure, using the above conversion factors will only provide an estimate. Actual manure test values will provide more accurate information.

• *TIP OF THE MONTH!*

Collect and analyze manure and/or wastewater samples at least annually for federal facilities; recommended for state permits. Recommended minimum analysis should include total nitrogen (N), organic N and phosphorus.

July 2019

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1 RCS Op Levels: RCS 1: RCS 2: RCS 3:	2	3 **Weekly inspection** ☐	4 **Independence Day**	5	6
7	8	9	10 **Weekly inspection** ☐	11	12	13
14	15 RCS Op Levels: RCS 1: RCS 2: RCS 3:	16	17 **Weekly inspection** ☐	18	19	20
21	22	23	24 **Weekly inspection** ☐	25	26	27
28	29	30	31 **Weekly inspection** ☐	If minimum operating level (storage capacity) is not available, record available feet of storage daily; dewater on all suitable days.		

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August 2019

Date	Precip-itation/ snow (S) (inches)	Daily Livestock Waste and/or Process Wastewater Disposal							
		Field ID (applied to) or RCS ID (transfers)	Soil condition: F = frozen T = thawed SC = snow cover S = saturated	# of acres (applied to)	Crop (growing or cover)	Waste source: solids, liquid	Application method	Total waste application	
								Solids (tons)	Liquids (gallons)

Head # _____

Animal Type / Wt

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Head # _____

Animal Type / Wt

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Head # _____

Animal Type / Wt

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Check buffer areas for maintenance needs. Erosion areas should be addressed and re-seeding planned if needed.

Notes

Conversion Factors for Manure*

1 ton = 2,000 pounds
1 cubic foot = 7.5 gallons
1 gallon = 8.3 pounds
1 yard = 27 cubic feet
1 cubic foot = 55 pounds (dry) to 62 pounds (wet)

For a quick, solid manure estimate, weigh a five-gallon pail of manure. Subtract the weight of the bucket (~ 2lbs) to get the actual weight of the manure. Multiply the weight of the manure by 40 to get pounds per cubic yard.

* Due to the variability of manure, using the above conversion factors will only provide an estimate. Actual manure test values will provide more accurate information.

• *TIP OF THE MONTH!*

Adding filter strips of close-growing vegetation on field borders or adjacent to bodies of water can reduce sediment and nutrients in runoff waters. This is especially important with phosphorus but is less effective at removing nitrates.

August 2019

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
If minimum operating level (storage capacity) is not available, record available feet of storage daily; dewater on all suitable days.				1 RCS Op Levels: RCS 1: RCS 2: RCS 3:	2	3
4	5	6	7 **Weekly inspection** ☐	8	9	10
11	12	13	14 **Weekly inspection** ☐	15 RCS Op Levels: RCS 1: RCS 2: RCS 3:	16	17
18	19	20	21 **Weekly inspection** ☐	22	23	24
25	26	27	28 **Weekly inspection** ☐	29	30	31

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September 2019

Date	Precip-itation/ snow (S) (inches)	Daily Livestock Waste and/or Process Wastewater Disposal							
		Field ID (applied to) or RCS ID (transfers)	Soil condition: F = frozen T = thawed SC = snow cover S = saturated	# of acres (applied to)	Crop (growing or cover)	Waste source: solids, liquid	Application method	Total waste application	
								Solids (tons)	Liquids (gallons)

Conversion Factors for Manure*

1 ton = 2,000 pounds
1 cubic foot = 7.5 gallons
1 gallon = 8.3 pounds
1 yard = 27 cubic feet
1 cubic foot = 55 pounds (dry) to 62 pounds (wet)

For a quick, solid manure estimate, weigh a five-gallon pail of manure. Subtract the weight of the bucket (~ 2lbs) to get the actual weight of the manure. Multiply the weight of the manure by 40 to get pounds per cubic yard.

* Due to the variability of manure, using the above conversion factors will only provide an estimate. Actual manure test values will provide more accurate information.

Head # _____
Animal Type / Wt
_____

Head # _____
Animal Type / Wt
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Head # _____
Animal Type / Wt
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Mortalities shall not be disposed of in any liquid manure, stormwater or process wastewater system. Burial, composting, rendering or permitted incinerations are appropriate disposal methods. Permit changes and prior approvals may be needed. Contact your district office for changes.

Notes

• ***TIP OF THE MONTH!***

Plan for needed land application prior to winter months.

September 2019

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1 RCS Op Levels: RCS 1: RCS 2: RCS 3:	2 **Labor Day**	3	4 **Weekly inspection** ☐	5	6	7
8	9	10	11 **Weekly inspection** ☐	12	13	14
15 RCS Op Levels: RCS 1: RCS 2: RCS 3:	16	17	18 **Weekly inspection** ☐	19	20	21
22	23	24	25 **Weekly inspection** ☐	26	27	28
29	30	If minimum operating level (storage capacity) is not available, record available feet of storage daily; dewater on all suitable days.				

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October 2019

Date	Precip-itation/ snow (S) (inches)	Daily Livestock Waste and/or Process Wastewater Disposal							
		Field ID (applied to) or RCS ID (transfers)	Soil condition: F = frozen T = thawed SC = snow cover S = saturated	# of acres (applied to)	Crop (growing or cover)	Waste source: solids, liquid	Application method	Total waste application	
								Solids (tons)	Liquids (gallons)

Head # _____
Animal Type / Wt
_____

Head # _____
Animal Type / Wt
_____

Head # _____
Animal Type / Wt
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Manage manure in lots and sediment basins to improve storage life of the retention structure and buffer areas.

Notes

Conversion Factors for Manure*

1 ton = 2,000 pounds
1 cubic foot = 7.5 gallons
1 gallon = 8.3 pounds
1 yard = 27 cubic feet
1 cubic foot = 55 pounds (dry) to 62 pounds (wet)

For a quick, solid manure estimate, weigh a five-gallon pail of manure. Subtract the weight of the bucket (~ 2lbs) to get the actual weight of the manure. Multiply the weight of the manure by 40 to get pounds per cubic yard.

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• *TIP OF THE MONTH!*

Do not supply more manure to crops than is necessary.
Plan to cut hay on buffer areas for nutrient removal.

October 2019

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1 RCS Op Levels: RCS 1: RCS 2: RCS 3:	2 **Weekly inspection** ☐	3	4	5
6	7	8	9 **Weekly inspection** ☐	10	11	12
13	14 **Columbus Day**	15 RCS Op Levels: RCS 1: RCS 2: RCS 3:	16 **Weekly inspection** ☐	17	18	19
20	21	22	23 **Weekly inspection** ☐	24	25	26
27	28	29	30 **Weekly inspection** ☐	31 **Halloween**	If minimum operating level (storage capacity) is not available, record available feet of storage daily; dewater on all suitable days.	

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November 2019

Date	Precip-itation/ snow (S) (inches)	Daily Livestock Waste and/or Process Wastewater Disposal							
		Field ID (applied to) or RCS ID (transfers)	Soil condition: F = frozen T = thawed SC = snow cover S = saturated	# of acres (applied to)	Crop (growing or cover)	Waste source: solids, liquid	Application method	Total waste application	
								Solids (tons)	Liquids (gallons)

Head # _____
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_____

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Animal Type / Wt
_____

Head # _____
Animal Type / Wt
_____

Review permit for December 1. Know operational level requirements; dewater as appropriate.

Cut and spray any seedling trees on berms of wastewater system.

Notes

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* Due to the variability of manure, using the above conversion factors will only provide an estimate. Actual manure test values will provide more accurate information.

• *TIP OF THE MONTH!*

Do not apply fertilizers, manures or lagoon water to frozen or saturated soil, or under conditions where runoff is likely such as immediately before heavy rains, on moderate to steep slopes, or next to streams or other water bodies.

November 2019

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
If minimum operating level (storage capacity) is not available, record available feet of storage daily; dewater on all suitable days.					1 RCS Op Levels: RCS 1: RCS 2: RCS 3:	2
3 **Daylight Saving Time ends**	4	5	6 **Weekly inspection** ☐	7	8	9
10	11 **Veteran's Day**	12	13 **Weekly inspection** ☐	14	15 RCS Op Levels: RCS 1: RCS 2: RCS 3:	16
17	18	19	20 **Weekly inspection** ☐	21	22	23
24	25	26	27 **Weekly inspection** ☐	28 **Thanksgiving**	29	30

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December 2019

Date	Precip-itation/ snow (S) (inches)	Daily Livestock Waste and/or Process Wastewater Disposal							
		Field ID (applied to) or RCS ID (transfers)	Soil condition: F = frozen T = thawed SC = snow cover S = saturated	# of acres (applied to)	Crop (growing or cover)	Waste source: solids, liquid	Application method	Total waste application	
								Solids (tons)	Liquids (gallons)

Head # _____

Animal Type / Wt

_____

Head # _____

Animal Type / Wt

_____

Head # _____

Animal Type / Wt

_____

Make sure items required by the permit are completed and organized for easy access. Keep records for five years.

Notes

Conversion Factors for Manure*

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1 gallon = 8.3 pounds
1 yard = 27 cubic feet
1 cubic foot = 55 pounds (dry) to 62 pounds (wet)

For a quick, solid manure estimate, weigh a five-gallon pail of manure. Subtract the weight of the bucket (~ 2lbs) to get the actual weight of the manure. Multiply the weight of the manure by 40 to get pounds per cubic yard.

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• *TIP OF THE MONTH!*

Good recordkeeping gives you the information you need to plan, carry out and refine management, helping make the most of your farm's manure.

December 2019

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1 RCS Op Levels: RCS 1: RCS 2: RCS 3:	2	3	4 **Weekly inspection** ☐	5	6	7
8	9	10	11 **Weekly inspection** ☐	12	13	14
15 RCS Op Levels: RCS 1: RCS 2: RCS 3:	16	17	18 **Weekly inspection** ☐	19	20	21
22 **Hanukkah begins**	23	24 **Weekly inspection** ☐ **Christmas Eve**	25 **Christmas Day**	26	27	28
29	30 **Hanukkah ends**	31 **New Year's Eve**	If minimum operating level (storage capacity) is not available, record available feet of storage daily; dewater on all suitable days.			

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Agronomic Manure References

Approximate fertilizer value of manure - liquid handling system				
Animal	**Available nutrients**			
	N	P_2O_5	K_2O	S
	lb/ac-in			
Swine	33	25	38	5-8
Beef Cattle	27	20	38	—
Dairy	25	10	32	3
Poultry	72	49	53	—

Ratio of organic -N and NH4-N in manure				
	Solid manure % of total manure N		**Liquid manure % of total manure N**	
	NH-N	Organic	NH-N	Organic
Dairy	45	55	50	50
Beef	35	65	50	50
Swine	60	40	70	30
Turkey	65	35	—	—

Estimated % of organic N available to crops after manure application			
	Year 1	**Year 2**	**Year 3**
Liquid Manure	30	12	6
Solid Manure	25	12	6
Compost	20	6	3

Source: Kansas State University Research and Extension

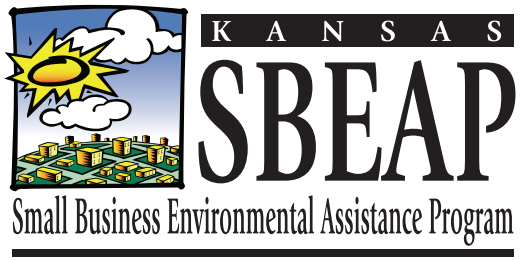
Conversion Factors for Manure Application Rates

Area and Volume

1 acre = 43,560 square feet
1 acre-inch = 27,000 gallons
1 acre-inch = 134 cubic yards
1 cubic yard = 27 cubic feet
1 cubic foot = 7.5 gallons

Approximate Manure Weight and Volume

1 cubic foot = 60–65 lb (fresh manure or slurry)
1 cubic yard = 202 gal or 1,700 lb = 0.85 tons (fresh manure or slurry)
1 cubic yard = 1,100 lb = 0.55 tons (separated solids)
1 cubic yard = 1,400 lb = 0.70 tons (dry stack)
1,000 gal = 4 tons (fresh manure or slurry)
1 ton = 1.2 cubic yards (fresh manure or slurry)
1 ton = 1.8 cubic yards (separated solids)
1 ton = 1.4 cubic yards (dry stack)



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